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REMARKS

**1. Claim Status**

Claims 1, 10, 13, 15, 17, 18, 20 26, 29, 35-37, 39, 41, 42, 48, 52-53, and 55-57 have been amended. Claims 2, 7-9, 19, 32-34, 38, 40 are canceled. Claim 59-65 have been added. After entering the amendments, claims 1, 3-6, 10-18, 20-31, 35-37, 39, 41-65 will be pending and under consideration.

**2. Claim Amendments**

Claim 1 has been amended to recite "separating the intermediate stream of step (a) into at least one product stream comprising the olefin oligomerization product and at least one heavies stream; wherein the separation comprises a distillation comprising a reboiler and material passed through the reboiler is maintained below about 190°C." This amendment finds support in original claims 2, 7, and 9.

Claim 18 has been amended to recite "separating the intermediate stream of step (b) into at least one olefin oligomerization product stream and at least one heavies stream; wherein the separation comprises a distillation comprising a reboiler and material passed through the reboiler is maintained below about 190°C." This amendment finds support in original claims 19, 32, and 34.

Claim 37 has been amended to recite "wherein the separation comprises a distillation comprising a reboiler and material passed through the reboiler is maintained below about 190°C." This amendment finds support in original claims 2, 7, and 9.

Claim 39 has been amended to recite "wherein material passed through the reboiler is maintained below about 175°C." This amendment finds support in paragraphs 57-60 of the specification.

Claim 57 has been amended to recite "wherein the separation comprises a distillation comprising a reboiler and material passed through the reboiler is maintained below about 190°C." This amendment finds support in paragraphs 57-60 of the specification.

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Claims 10 and 35 have been amended to remove redundant elements found in a claim from which they depend and to provide proper claim.

Claims 10, 13, 17, 26, 29, 35, 36, 41, 53, and 56 have been amended to correct minor errors in claim dependencies and/or provide proper claim dependency in light of the amendments to the independent claims.

Claims 15, 20, 42, 48, 52, and 55 have been amended to provide proper antecedent basis for the claim terms.

New claims 59-61 have been added to claim "the 1-hexene produced by" the processes of claims 18, 37, and 57, respectively. Support for these new claims can be found in paragraph 21 of the specification.

New claims 62-65 have been added to recite "wherein the separation comprises at least two distillation stages and material passed through each reboiler is maintained below about 190°C" for the processes of claims 1, 18, 37, and 57, respectively. The recitation that the separation comprises "at least two distillation stages" is supported by claims 13, 36, and 41 which recite that the distillation process or distillation "includes at least two distillation stages." Support for the recitation that "each reboiler is maintained below about 190 °C" may be found in paragraphs 57-60 of the specification

Additional claim amendments have been introduced to provide proper antecedent basis for the claim elements. Applicants believe that no new matter has been introduced by the amendments made herein.

### 3. 35 U.S.C. § 103 Claim Rejections

Claims 1-58 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Lashier et al., U.S. Patent 5,689,028 (hereafter "Lashier"), Araki et al., U.S. Patent 5,750,816 (hereafter "Araki"), and Kreischer et al., U.S. Patent 6,380,451 (hereafter "Kreischer"), considered separately. Specifically, the Office Action dated March 27, 2007 (hereafter "Office Action"), states that processes of Lashier, Araki, or Kreischer appear "indistinguishable from the claimed processes." Applicants respectfully traverse these claim rejections.

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The Office Action states that Lashier discloses an olefin production process utilizing a catalyst comprising a chromium source, a pyrrole-containing compound, and a metal alkyl (which may be a halogenated alkylaluminum compound), comprising the sequential steps of contacting a reactor effluent with an alcohol, and recovering any desired olefin product(s). The Office Action states that Araki discloses a process for preparing alpha-olefin oligomers utilizing a catalyst comprising a chromium source, a pyrrole-containing compound, and a metal alkyl (which may be a halogenated alkylaluminum compound), recovering the produced alpha-olefin oligomers (along with the catalyst components and byproduct polymer) from the reaction solution and that an alcohol compound may be added to the reaction solution. The Office Action states that Kreischer discloses a process for making a higher olefin in a reactor utilizing a catalyst comprising a chromium source, a pyrrole-containing compound, and a metal alkyl, and contacting the interior surface of the reactor with an alcohol under conditions effective to remove at least a substantial portion of the catalyst residue from the interior surface of the reactor.

Applicants respectfully submit that Lashier, Araki, and Kreischer, considered singly or in any combination, do not establish a *prima facie* case of obviousness as to the pending claims. According to MPEP § 2142, three basic criteria must be met to establish a *prima facie* case of obviousness:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

Additionally, the Examiner has the burden of proof with respect to the elements of the *prima facie* case of obviousness is also well defined in MPEP § 2142:

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

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Applicants respectfully submit that the Office Action has not established a *prima facie* case of obviousness because Lashier, Araki, or Kreischer do not teach or suggest, either singly or in combination, each and every limitation of independent claims 1, 18, 37, and 57. Specifically, each independent claim recites that "the separation comprises a distillation comprising a reboiler and material passed through the reboiler is maintained below about 190°C." Lashier, Araki, and/or Kreischer, do not teach or suggest that "the material passed through the reboiler is maintained below about 190°C." Consequently, independent claims 1, 18, 37, and 57 are allowable over the cited references. Additionally, dependent claims 3-6, 10-17, 20-31, 35-36, 39, 41-56, and 58-65 are allowable because they depend from an allowable claim. Applicants respectfully request that the rejection of the pending claims be withdrawn.

In relation to independent claim 18, the process of claim 18 includes a step of "minimizing water content in an alcohol." Lashier, Araki, and/or Kreischer do not teach or suggest "minimizing water content in an alcohol" used to form "an intermediate stream by contacting an olefin oligomerization reactor effluent stream which comprises olefin product(s), catalyst system, and heavies with the alcohol." In fact, because the alcohol is used to deactivate the catalyst system, water contained in the alcohol would not have been considered detrimental to the catalyst system deactivation. Consequently, independent claim 18 and claims 19-21, 24, 25, 27-36, 51, 53, and 56, which depend on claim 18, are allowable over the cited references. Applicants respectfully request that the rejection of claims 18, 20-21, 24, 25, 27-31, 35-36, 51, 53, and 56 be withdrawn.

#### 4. Final Remarks

In commenting upon the cited references and the pending claims, certain details of distinction between the cited references and the pending claims have been mentioned to facilitate a better understanding of the claimed invention. The unclaimed distinctions are not intended to create any implied limitations in the claims. Additionally, not all distinctions between the cited references and Applicants' present invention have been presented by the Applicants. Applicants reserve the right to submit additional evidence demonstrating that Applicants' invention is novel and nonobvious in view of the cited references.

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The foregoing remarks are intended to assist the Examiner in re-examining the application and, in the course of explanation, may employ shortened, more specific, or variant descriptions of some of the claim language. Such descriptions are not intended to limit the scope of the claims. The actual claim language should be considered in each case. Furthermore, the remarks only represent certain advantageous features and differences between the pending claims and the cited references that Applicants' attorney chooses to mention at this time. The remarks should not be considered exhaustive to all features which render the invention patentable.

Reconsideration of the pending claims is respectfully requested. In view of the foregoing remarks and the Office Action cited references, Applicants respectfully submit that the pending claims under consideration are in condition for allowance. The Examiner is invited to contact the undersigned patent attorney at (832) 813-4339 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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